

CFAM2 表示形式

PATENT FAMILY INFORMATION

AN 7656040 INPAFAMDB

+----- Publications -----+

AU 9857643	A	19980731
AU 9862916	A	19980731
CA 2276093	A1	19980709
CA 2276110	A1	19980709
EP 866129	A2	19980923
EP 951538	A2	19991027
EP 953044	A2	19991103
JP 2001509012	T	20010710
JP 2001508289	T	20010626
JP 11225770	A	19990824
US 6239264	B1	20010529
US 6489147	B1	20021203
WO 9829538	A2	19980709
WO 9829538	A3	19981210
WO 9829539	A2	19980709
WO 9829539	A3	19981112

+----- Applications -----+

AU 1998-57643	A	19971229
AU 1998-62916	A	19971229
CA 1997-2276093	A	19971229
CA 1997-2276110	A	19971229
EP 1997-811020	A	19971224
EP 1997-953928	A	19971229
EP 1997-954977	A	19971229
JP 1998-529616	T	19971229
JP 1998-529618	T	19971229
JP 1998-76818	A	19980105
US 1997-998416	A	19971224
US 1999-331403	A	19990621
WO 1997-EP7309	W	19971229
WO 1997-EP7312	W	19971229

+----- Priorities -----+

CH 1997-16	A	19961231
EP 1997-811020	A	19971224
WO 1997-EP7309	W	19971229
WO 1997-EP7312	W	19971229
US 1997-998416	A	19971224

5 priorities, 14 applications, 16 publications

SFAM 表示形式

PATENT FAMILY INFORMATION

AN 7656040 INPAFAMDB

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EPO simple family (SFN): 4177492
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+----- Publications -----+		+----- Applications -----+	
AU 9857643	A 19980731	AU 1998-57643	A 19971229
CA 2276093	A1 19980709	CA 1997-2276093	A 19971229
CA 2276110	A1 19980709	CA 1997-2276110	A 19971229
EP 951538	A2 19991027	EP 1997-953928	A 19971229
JP 2001509012	T 20010710	JP 1998-529616	T 19971229
JP 2001508289	T 20010626	JP 1998-529618	T 19971229
US 6489147	B1 20021203	US 1999-331403	A 19990621
WO 9829539	A2 19980709	WO 1997-EP7312	W 19971229
WO 9829539	A3 19981112		

+----- Priorities -----+		+-----+-----+	
CH 1997-16	A 19961231	(CHA, Y)	
WO 1997-EP7312	W 19971229	(WOWW, N)	
WO 1997-EP7309	W 19971229	(WOWW, N)	

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EPO simple family (SFN): 25683263
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+----- Publications -----+		+----- Applications -----+	
AU 9862916	A 19980731	AU 1998-62916	A 19971229
EP 953044	A2 19991103	EP 1997-954977	A 19971229
JP 11225770	A 19990824	JP 1998-76818	A 19980105
US 6239264	B1 20010529	US 1997-998416	A 19971224
WO 9829538	A2 19980709	WO 1997-EP7309	W 19971229
WO 9829538	A3 19981210		

+----- Priorities -----+		+-----+-----+	
CH 1997-16	A 19961231	(CHA, Y)	
WO 1997-EP7309	W 19971229	(WOWW, N)	
US 1997-998416	A 19971224	(USAT, Y)	
US 1997-998416	A 19971224	(USA, Y)	
CH 1997-16	A 19961231	(CHAT, Y)	

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EPO simple family (SFN): 27171717
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+----- Publications -----+		+----- Applications -----+	
EP 866129	A2 19980923	EP 1997-811020	A 19971224

+----- Priorities -----+		+-----+-----+	
EP 1997-811020	A 19971224	(EPA, Y)	
CH 1997-16	A 19961231	(CHA, Y)	
US 1997-998416	A 19971224	(USAT, Y)	

5 priorities, 14 applications, 16 publications

FAMLS 表示形式

TITLE: Laser cutting apparatus.

PATENT FAMILY INFORMATION

AN 47993687 INPADOCDB

+----- Publications -----+		+----- Applications -----+	
DE 69419231	D1 19990729	DE 1994-69419231	A 19941116
DE 69419231	T2 19991111		
EP 654251	A2 19950524	EP 1994-308483	A 19941116
EP 654251	A3 19950816		
EP 654251	B1 19990623		
JP 07136184	A 19950530	JP 1993-312627	A 19931118
JP 2670420B	B2 19971029		
US 5636983	A 19970610	US 1994-341517	A 19941117

+----- Priorities -----+	
JP 1993-312627	A 19931118

LEGAL STATUS INPADOCDB

19931118 JPA	PRI Patent application JP 1993-312627	A 19931118
19931118 JPA	APP Patent application JP 1993-312627	A 19931118
19941116 DEA	APP Patent application DE 1994-69419231	A 19941116
19941116 EPA	APP Patent application EP 1994-308483	A 19941116
19941117 USA	APP Patent application US 1994-341517	A 19941117
19950524 EPA2	PUB APPLICATION PUBLISHED WITHOUT SEARCH REPORT [EP 1994-308483 A2 19941116] EP 654251 A2 19950524	
19950524 EPAK	+ DESIGNATED CONTRACTING STATES: [EP 1994-308483 A 19941116] EP A2 DE FR GB	
19950530 JPA	PUB DOC. LAID OPEN TO PUBL. INSPEC. [PUBLISHED FROM 1971 ONWARDS] [JP 1993-312627 A 19931118] JP 07136184 A 19950530	
19950816 EPA3	PUB SEARCH REPORT [EP 1994-308483 A3 19941116] EP 654251 A3 19950816	
19950816 EPAK	+ DESIGNATED CONTRACTING STATES: [EP 1994-308483 A 19941116] EP A3 DE FR GB	
19960313 EP17P	+ REQUEST FOR EXAMINATION FILED [EP 1994-308483 A 19941116] 19960115	
19970610 USA	EXA Examination, Search Report PUB PATENT [FROM BEGIN UNTIL END 2000] or PATENT ISSUED AFTER 1ST PUB. WITHIN THE TVPP [US 1994-341517 A 19941117] US 5636983 A 19970610	
19971029 JPB2	PUB GRANT. PATENT WITH A [FROM 2500000 ONWARDS, FROM 1996] [JP 1993-312627 B2 19931118] JP 2670420B B2 19971029	
19980408 EP17Q	+ FIRST EXAMINATION REPORT [EP 1994-308483 A 19941116] 19980223	
19990623 EPB1	EXA Examination, Search Report PUB PATENT SPECIFICATION [EP 1994-308483 B1 19941116]	

19990623 EPAK EP 654251 B1 19990623
 + DESIGNATED CONTRACTING STATES:
 [EP 1994-308483 A 19941116]
 EP B1
 DE FR GB
 19990729 DED1 PUB GRANTED EP NUMBER IN BULLETIN [FROM 1,400,000 ONWARDS]
 [DE 1994-69419231 D1 19941116]
 DE 69419231 D1 19990729
 19990729 EPREF CORRESPONDS TO:
 [EP 1994-308483 A 19941116]
 DE 69419231 19990729 P
 19990813 EPET + FR: TRANSLATION FILED
 [EP 1994-308483 A 19941116]
 19991111 DET2 PUB TRANSLATION OF EP PATENT
 [DE 1994-69419231 T2 19941116]
 DE 69419231 T2 19991111
 20000614 EP26N + NO OPPOSITION FILED
 [EP 1994-308483 A 19941116]
 20000720 DE8364 + NO OPPOSITION DURING TERM OF OPPOSITION
 [DE 1994-69419231 A 19941116]
 20020101 EPREG REFERENCE TO A NATIONAL CODE
 [EP 1994-308483 A 19941116]
 GBIF02 + GB: EUROPEAN PATENT IN FORCE AS OF 2002-01-01
 20061127 EPPGFP + POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
 [EP 1994-308483 A 19941116]
 DE: 20061127
 Payment Year: 13
 200810.....20080307
 20061215 EPPGFP + POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
 [EP 1994-308483 A 19941116]
 FR: 20061215
 Payment Year: 13
 200810.....20080307
 20061218 EPPGFP + POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
 [EP 1994-308483 A 19941116]
 GB: 20061218
 Payment Year: 13
 200810.....20080307
 20080430 EPPGFP + POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
 [EP 1994-308483 A 19941116]
 FR: 20071127
 Payment Year: 14
 200820.....20080515
 20080430 EPPGFP + POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
 [EP 1994-308483 A 19941116]
 GB: 20071127
 Payment Year: 14
 200820.....20080515
 20080530 EPPGFP + POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
 [EP 1994-308483 A 19941116]
 DE: 20071228
 Payment Year: 14
 200823.....20080605
 20081031 EPPGFP + POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
 [EP 1994-308483 A 19941116]
 GB: 20051129
 Payment Year: 12
 200845.....20081107

1 priority, 4 applications, 8 publications

MAXO2 表示形式 (INPAFAMDB ファイル)

(INPADOCDB ファイルの MAXO2.F 表示形式に相当)

MEMBER 1

AN 37618244 INPAFAMDB ED 20090212 EW 200907 UP 20090219 UW 200908 [Full-text](#)
DN 58009174
SFN 38694904
TI Verfahren und Vorrichtung zur Positions- oder Bewegungserkennung einer
Vorrichtung oder eines Lebewesens.
Method and device for recognising the position or movement of a device or
living being.
Procédé et dispositif de reconnaissance de position ou de
mouvement d'un dispositif ou d'un être vivant.
TL German; English; French
IN BONNET, STEPHANE; GODIN, CHRISTELLE
INS BONNET STEPHANE, FR; GODIN CHRISTELLE, FR
PA COMMISSARIAT A L'ENERGIE ATOMIQUE
PAS COMMISSARIAT ENERGIE ATOMIQUE, FR
DT Patent
PI EP 2023268 A1 20090211 French
PIT EPA1 APPLICATION PUBLISHED WITH SEARCH REPORT
DAV 20090211 examined-printed-without-grant
STA PRE-GRANT PUBLICATION
DS R: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI
LT LU LV MC MT NL NO PL PT RO SE SI SK TR
XS R: AL BA MK RS
AI EP 2008-159980 A 20080709
AIO 08159980
AIT EPA Patent application
PRAI FR 2007-56683 A 20070723 (FRA, 20090205, Y)
PRAO 0756683
PRAIT FRA Patent application
REC 9. THERE ARE 9 CITED REFERENCES (2 PATENT, 7 NON PATENT) AVAILABLE FOR
THIS RECORD.
REP WO 2005094676 A1 (SEA, pat, Cat: A)
US 6834436 B2 (APP, pat)
REXP XP008041999 (SEA, Cat: A)
XP002315239 (SEA, Cat: AD)
XP010573412 (SEA, Cat: A)
REN (1) FAHRENBERG J ET AL: "ASSESSMENT OF POSTURE AND MOTION BY
MULTICHANNEL PIEZORESISTIVE ACCELEROMETER RECORDINGS" PSYCHOPHYSIOLOGY,
SOCIETY FOR PSYCHOPHYSIOLOGICAL RESEARCH, US, volume 34, number 5, 1997,
pages 607-612, XP008041999 ISSN: 0048-5772 (SEA, Cat: A)
(2) VELTINK P H ET AL: "Detection of static and dynamic activities using
uniaxial accelerometers" IEEE TRANSACTIONS ON REHABILITATION ENGINEERING,
IEEE INC. NEW YORK, US, volume 4, number 4, decembre 1996 (1996-12), pages
375-385, XP002315239 ISSN: 1063-6528 (SEA, Cat: AD)
(3) MARINS J L ET AL: "An extended kalman filter for quaternion-based
orientation estimation using MARG sensors" PROCEEDINGS OF THE 2001
IEEE/RSJ INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS.
(IROS 2001). MAUI, HAWAII, OCT. 29 - NOV. 3, 2001, IEEE/RSJ INTERNATIONAL
CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS, NEW YORK, NY : IEEE, US,
volume VOL. 1 OF 4, 29 octobre 2001 (2001-10-29), pages 2003-2011,
XP010573412 ISBN: 0-7803-6612-3 (SEA, Cat: A)
(4) P. H. VELTINK ET AL.: 'Detection of static and dynamic activities
using uniaxial accelerometers' IEEE TRANS. REHAB. ENG. volume 4, number 4,
Decembre 1996, pages 375 - 385 (APP)
(5) G. M. LYONS ET AL.: 'A description of an accelerometer-based mobility
monitoring technique' MEDICAL ENGINEERING AND PHYSICS volume 27, 2005,
pages 497 - 504 (APP)
(6) N. C. BHAVARAJU; M. G. FREI; I OSORIO: 'Analog Seizure Detection and

Performance Evaluation' IEEE TRANS. ON BIOMEDICAL ENG. volume 53, number 2, Fevrier 2006, (APP)

(7) NICOLAOS B. KARAYIANNIS: 'Automated Detection of Videotaped Neonatal Seizures of Epileptic Origin' EPILEPSIA volume 47, number 6, 2006, pages 966 - 980 (APP)

IPC1 G06K0009-00 [I, A]; A61B0005-11 [I, A]; G06K0009-22 [I, A];
G06K0009-68 [I, A]; G06K0009-00 [I, C*]; A61B0005-11 [I, C*];
G06K0009-22 [I, C*]; G06K0009-68 [I, C*]

EPC G06K0009-00G1; G06K0009-22W; G06K0009-68A

ABFR Ce procédé utilise deux jeux de capteurs pour estimer certaines caractéristiques du mouvement d'un dispositif ou d'un être vivant ou des états, notamment des postures, qu'ils prennent. Un premier jeu, abondant, de capteurs (1) est retiré après une phase d'apprentissage où il a enregistré avec sûreté les états obtenus en exploitant des premières règles de décision. Les mesures d'un second jeu de capteurs (2), beaucoup plus réduit que le premier, sont corrélées aux états atteints pendant l'apprentissage par des secondes règles de décision obtenues automatiquement en alimentant un classificateur. Elles sont ensuite exploitées pour déterminer les nouveaux états atteints par le porteur au moyen des seuls seconds capteurs. Les résultats sont bons malgré le petit nombre des seconds capteurs, grâce à la précision des secondes règles de décision.

AL French

AS EPO

FA ABFR; AI; AN; DAV; DS; DT; ED; EPC; EW; IN; INS; IPC; IPC1; LA; PA; PAS; PI; PIT; PRAI; REN; REP; REXP; TI

CHG CIT A

LEGAL STATUS

AN 37618244 INPAFAMDB [Full-text](#)

20090211 EPAX + DESIGNATED CONTRACTING STATES:
EP A1
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT
LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR
200907.....20090212
20090211 EPAX + EXTENSION OF THE EUROPEAN PATENT TO
AL BA MK RS
200907.....20090212

MEMBER 2

AN 37618244 INPAFAMDB ED 20090205 EW 200906 UP 20090205 UW 200907 [Full-text](#)
DN 57921649
SFN 38694904
TI PROCEDE ET DISPOSITIF DE RECONNAISSANCE DE POSITION OU DE MOUVEMENT D'UN DISPOSITIF OU D'UN ETRE VIVANT.
TL French
IN BONNET STEPHANE; GODIN CHRISTELLE
INS BONNET STEPHANE; GODIN CHRISTELLE
PA COMMISSARIAT A L'ENERGIE ATOMIQUE ETABLISSEMENT PUBLIC A CARACTERE INDUSTRIEL ET COMMERCIAL
PAS COMMISSARIAT ENERGIE ATOMIQUE, FR
DT Patent
PI FR 2919406 A1 20090130 French
PIT FRA1 APPLICATION FOR PATENT OF INVENTION, (FIRST PUBL.) [FROM 2,000,000]
DAV 20090130 examined-printed-without-grant
STA PRE-GRANT PUBLICATION
AI FR 2007-56683 A 20070723
AIO 0756683
AIT FRA Patent application
PRAI FR 2007-56683 A 20070723 (FRA, 20090205, Y)
PRAIT FRA Patent application

REC 4. THERE ARE 4 CITED REFERENCES (1 PATENT, 3 NON PATENT) AVAILABLE FOR THIS RECORD.

REP WO 2005094676 A1 (SEA, pat, Cat: A)

REXP XP008041999 (SEA, Cat: A)

XP002315239 (SEA, Cat: AD)

XP010573412 (SEA, Cat: A)

REN (1) FAHRENBERG J ET AL: "ASSESSMENT OF POSTURE AND MOTION BY MULTICHANNEL PIEZORESISTIVE ACCELEROMETER RECORDINGS" PSYCHOPHYSIOLOGY, SOCIETY FOR PSYCHOPHYSIOLOGICAL RESEARCH, US, volume 34, number 5, 1997, pages 607-612, XP008041999 ISSN: 0048-5772 (SEA, Cat: A)

(2) VELTINK P H ET AL: "Detection of static and dynamic activities using uniaxial accelerometers" IEEE TRANSACTIONS ON REHABILITATION ENGINEERING, IEEE INC. NEW YORK, US, volume 4, number 4, decembre 1996 (1996-12), pages 375-385, XP002315239 ISSN: 1063-6528 (SEA, Cat: AD)

(3) MARINS J L ET AL: "An extended kalman filter for quaternion-based orientation estimation using MARG sensors" PROCEEDINGS OF THE 2001 IEEE/RSJ INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS. (IROS 2001). MAUI, HAWAII, OCT. 29 - NOV. 3, 2001, IEEE/RSJ INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS, NEW YORK, NY : IEEE, US, volume VOL. 1 OF 4, 29 octobre 2001 (2001-10-29), pages 2003-2011, XP010573412 ISBN: 0-7803-6612-3 (SEA, Cat: A)

IPC1 G06K0009-00 [I,A]; A61B0005-11 [I,A]; G06K0009-00 [I,C*]; A61B0005-11 [I,C*]

EPC G06K0009-00G1; G06K0009-22W; G06K0009-68A

ABFR Ce procédé utilise deux jeux de capteurs pour estimer certaines caractéristiques du mouvement d'un dispositif ou d'un être vivant ou des états, notamment des postures, qu'ils prennent. Un premier jeu, abondant, de capteurs (1) est retiré après une phase d'apprentissage où il a enregistré avec sûreté les états obtenus en exploitant des premières règles de décision. Les mesures d'un second jeu de capteurs (2), beaucoup plus réduit que le premier, sont corrélées aux états atteints pendant l'apprentissage par des secondes règles de décision obtenues automatiquement en alimentant un classificateur. Elles sont ensuite exploitées pour déterminer les nouveaux états atteints par le porteur au moyen des seuls seconds capteurs. Les résultats sont bons malgré le petit nombre des seconds capteurs, grâce à la précision des secondes règles de décision.

AL French

AS national office

FA ABFR; AI; AN; DAV; DT; ED; EPC; EW; IN; INS; IPC; IPC1; LA; PA; PAS; PI; PIT; PRA1; REN; REP; REXP; TI

MEMBER 3

AN 37618244 INPAFAMDB ED 20090212 EW 200907 UP 20090212 UW 200907 [Full-text](#)

DN 58002192

SFN 38694904

TI METHOD AND DEVICE FOR THE RECOGNITION OF THE POSITION OR MOVEMENT OF A DEVICE OR A PERSON.

TL English

IN BONNET STEPHANE; GODIN CHRISTELLE

INS BONNET STEPHANE, FR; GODIN CHRISTELLE, FR

PA COMMISSARIAT A L'ENERGIE ATOMIQUE

PAS COMMISSARIAT ENERGIE ATOMIQUE, FR

DT Patent

PI US 20090030345 A1 20090129 English

PIT USA1 FIRST PUBLISHED PATENT APPLICATION [FROM 2001 ONWARDS]

DAV 20090129 unexamined-printed-without-grant

STA PRE-GRANT PUBLICATION

AI US 2008-178559 A 20080723

AIO 12178559

AIT USA Patent application

PRAI FR 2007-56683 A 20070723 (FRA, 20090205, Y)

PRAO 07 56683

PRAIT FRA Patent application

IPC1 A61B0005-22 [I, A]; A61B0005-22 [I, C*]

NCL 600587

EPC G06K0009-00G1; G06K0009-22W; G06K0009-68A

AB This method uses two sets of sensors to estimate certain characteristics of the movement of a device or a person or states, especially postures, they adopt. A first, abundant, set of sensors (1) is removed after a learning phase where it records with certainty the states obtained by interpreting first decisional rules. The measurements of a second set of sensors (2), much more restricted than the first, are correlated to the states reached during the learning period by second decisional rules automatically obtained by supplying a classifier. They are then interpreted to determine the new states reached by the wearer just by means of the second sensors. The results are good in spite of the low number of second sensors, thanks to the accuracy of the second decisional rules.

AL English

AS national office

FA AB; AI; AN; DAV; DT; ED; EPC; EW; IN; INS; IPC; IPC1; LA; NCL; PA; PAS;

PI; PIT; PRAI; TI

1 priority, 3 applications, 3 publications

INPAFAMDB ファイルの PI.PDF 表示形式

=> FILE INPAFAMDB

=> S US5636983/PN
L1 1 US5636983/PN

=> D PI.PDF ← 特許ファミリーすべてのリンクを表示

L1 ANSWER 1 OF 1 INPAFAMDB COPYRIGHT 2009 EPO/FIZ KA on STN
PI DE 69419231 D1 19990729
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=DE&NR=69419231D&KC=D1>
PI DE 69419231 T2 19991111
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=DE&NR=69419231T&KC=T2>
PI EP 654251 A2 19950524
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=EP&NR=0654251&KC=A2>
PI EP 654251 A3 19950816
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=EP&NR=0654251&KC=A3>
PI EP 654251 B1 19990623
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=EP&NR=0654251&KC=B1>
PI JP 07136184 A 19950530
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=JP&NR=7136184&KC=A>
PI JP 2670420B B2 19971029
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=JP&NR=2670420B2&KC=B2>
PI **US 5636983** **A 19970610**
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=US&NR=5636983&KC=A>

=> D PI.PDF.H ← ヒットした公報のリンクのみを表示

L1 ANSWER 1 OF 1 INPAFAMDB COPYRIGHT 2009 EPO/FIZ KA on STN
PI **US 5636983** **A 19970610**
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=US&NR=5636983&KC=A>

1 priority, 4 applications, 8 publications

=> D PI.PDF.B ← ベーシックドキュメントのリンクのみを表示

L1 ANSWER 1 OF 1 INPAFAMDB COPYRIGHT 2009 EPO/FIZ KA on STN
PI EP 654251 A2 19950524
URL:<http://v3.espacenet.com/publicationDetails/originalDocument?CC=EP&NR=0654251&KC=A2>

1 priority, 4 applications, 8 publications

リンクをクリックするとブラウザが起動し, esp@cenet の PDF が表示されます (次ページ参照)

Quick Search
 Advanced Search
 Number Search
 Last result list
 My patents list 0
 Classification Search
 Help
 Quick Help
 » How can I maximise the page view?
 » How can I print?
 » How can I save a document?

In my patents list | Print | Maximise | Save Full Document

Laser cutting apparatus.

Bibliographic data Description Claims Mosaics Original document INPADOC legal status

1 / 5 43.5%

検索

しおり オプション

- Abstract
- Bibliographic data
- Description
- Claims
- Drawings

EP 0 654 251 A2

Europäisches Patentamt
 European Patent Office
 Office européen des brevets

Publication number: 0 654 251 A2

EUROPEAN PATENT APPLICATION

Application number: 94366483.0
 Int. Cl.⁷: A61C 1/00

Date of filing: 16.11.94

Priority: 16.11.93 JP 31262793
 Date of publication of application: 24.05.95 Bulletin 9521
 Designated Contracting States: DE FR GB

Applicant: THE YOSHIDA DENTAL MFG. CO. LTD.
 1-3-6 Kobanashi, Sundeicho, Tokyo (JP)

Inventor: Shoji, Shigeno
 3-4-7 Misasagi, Aoba-ku, Sendai, Miyagi (JP)
 Inventor: Hirotsugu, Hiroshi
 3-15-18 Kitagomori, Aoba-ku, Sendai, Miyagi (JP)
 Inventor: Hiroyuki, Kazuo, c/o The Yoshida Dental Mfg.Co.Ltd.
 1-3-6 Kobanashi, Sundeicho, Tokyo (JP)

Representative: Boydell, John Christopher
 Stevens, Hewlett & Parkins
 1 Berkeley Lane, Fleet Street, London EC4Y 1LL, GB

Abstract

A laser cutting apparatus which comprises a laser emitter 11 capable of outputting a laser beam 4 in pulses and a laser beam irradiation member 1; a dental-crown polishing and washing member 12 having an injection member 2 through which air 6, water 8 and polishing material 7 are output toward a laser-beam-irradiated surface; and a control member 14 capable of controlling the operation of the laser emitter 11 and the dental-crown polishing and washing member 12, wherein the laser beam irradiation member 1 and the injection member 2 are combined with each other by means of an adaptor 10 disposed therebetween, thereby enabling both the laser beam irradiation member 1 and the injection member 2 to be held and operated by a single hand. By employing this laser cutting apparatus, a high-energy laser beam can be used in medical and dental fields for removing soft dentin to form a cavity, without the occurrence of problems due to the irradiation of a high-energy laser beam, such as the production and deposition of a carbonized layer in the dentin, the formation of a cavity margin having an irregular configuration, and the cracking and damaging of the dental pulp attached to a temperature rise.

FIG 1

JANU. 18, 1995 (1995-01-18)

INPADOCDB ファイルでの ABEQ の表示

=> FILE INPADOCDB

=> S JP2007289664/PN

L1 1 JP2007289664/PN

=> D ALL

L1 ANSWER 1 OF 1 INPADOCDB COPYRIGHT 2009 EPO/FIZ KA on STN

AN 55348171 INPADOCDB ED 20071213 EW 200750 UP 20080417 UW 200816 [Full-text](#)

FN 36018197

TI INJECTION NEEDLE MANUFACTURING METHOD AND INJECTION NEEDLE.

TL English

IN TAMURA SATOSHI; KENJO AKIRA

INS TAMURA SATOSHI; KENJO AKIRA

PA NF TECHNO SUMMIT CORP

PAS NF TECHNO SUMMIT CORP

DT Patent

PI **JP 2007289664** A **20071108**

PIT JPA DOC. LAID OPEN TO PUBL. INSPEC. [PUBLISHED FROM 1971 ONWARDS]

DAV 20071108 unexamined-printed-without-grant

STA PRE-GRANT PUBLICATION

AI JP 2007-52082 A 20070301

AIT JPA Patent application

PRAI JP 2006-97508 A 20060331 (JPA, 20071018, Y)

JP 2007-52082 A 20070301 (JPA, 20071018, Y)

PRAIT JPA Patent application

IPCI A61M0005-32 [I, A]; A61M0005-158 [I, A]; C25D0001-02 [I, A]

A61M0005-32 [I, C*]; A61M0005-14 [I, C*]; C25D0001-00 [I, C*]

EPC A61M0005-32F

ABEQ (US 2007256289 A1)

[← 対応特許 US2007256289 の抄録を表示](#)

An injection needle master is manufactured (S 1), the injection needle master is mounted on a master receiving holder (S 2), an electroforming metal is adhered to the injection needle master by an electroforming treatment (S 3) and, finally, the injection needle master is pulled from an electroforming tank together with the master receiving holder whereupon the electroforming body, which constitutes the injection needle main body, is released from the injection needle master (S 4). The manufactured injection needle comprises a tapered portion in which the outer diameter of the puncture tip-end portion is about 0.12 mm and in which the outer diameter narrows between the base-end portion and the puncture tip-end portion.

AL English

AS national office

FA AI; AN; DAV; DT; ED; EPC; EW; IN; INS; IPC; IPCI; PA; PAS; PI; PIT; PRAI;

TI

CHG EPC C